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## COMMONWEALTH of VIRGINIA

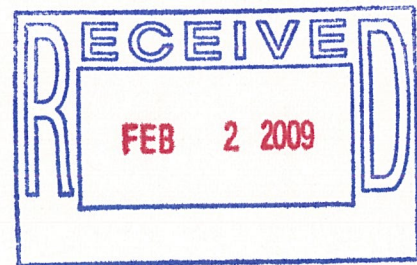
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**Virginia Port Authority**  
**600 World Trade Center**  
**Norfolk, Virginia 23510-1679**  
**Telephone (757) 683-8000**  
**Fax (757) 683-8500**

**Jerry A. Bridges**  
*Executive Director*

January 30, 2009



Charles Badger, Director  
Virginia Department of Rail and Public Transportation  
1313 East Main Street, Suite 300  
Richmond, VA 23219

RE: Rail Enhancement Funding Application  
Craney Island Rail Connector

Dear Charles,

The enclosed Rail Enhancement Funding (REF) application package is submitted seeking \$18,340,000 in REF funding assistance for preliminary engineering, environmental assessment, design, and construction of the Craney Island Rail Connector (CIRC) Project.

The CIRC is a planned multimodal rail corridor connecting the future Craney Island Marine Terminal (CIMT) on the Craney Island Dredged Material Management Area (CIDMMA) Eastward Expansion to the Commonwealth Railway mainline track, through the APM Terminal rail interface, and along the median of the Route 164 Western Freeway to Route 17.

The CIRC is driven by the need to support the construction of, and then operation of, the Craney Island Marine Terminal. The CIRC will provide direct rail access to CIMT and the ability to stage and sequence long trains without obstructing the mainline track. With its ability to transport up to 50% of the terminal's inbound and outbound containerized cargo by rail, the project will reduce congestion and potential train movement delays at the APM rail interface, thus contributing to the reduction of future rail network congestion elsewhere in the region.

VPA, through revenue generated from Virginia International Terminals (VIT) terminal operations (as opposed to Commonwealth Port Funds provided by the Commonwealth of Virginia), will provide a 30% match totaling \$7,860,000. The requested Rail Enhancement Funds amount to 70% or \$18,340,000.

Please let us know if you need any additional information, and if a briefing would facilitate a better understanding of the CIRC, and the importance of this funding application.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevin P. Abt", with a stylized flourish extending to the right.

Kevin P. Abt, P.E.  
Chief Engineer





**Rail Enhancement Fund  
Project Application Form**

Internal Use

DRPT Tracking #

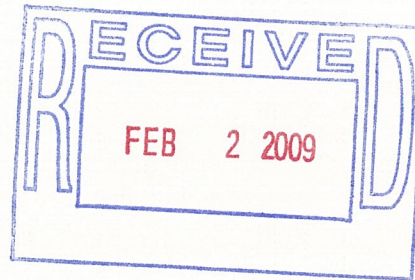
Date: **01/30/2009**

**A. Name of Applicant (Name and Address)**

Virginia Port Authority  
600 World Trade Center  
Norfolk, VA 23510

**Applicant type:**

- ☐ Passenger Railroad  
☐ Freight Railroad  
☐ Locality  
☐ Business  
☒ Other (Regional Agency)



**B. Contact Information:**

Responsible Person/Title: Jeff Florin/ Deputy Executive Director, Operations, COO

Telephone: 757-683-2150    Fax: 757-683-2151    Email: jflorin@portofvirginia.com

Project Manager/Title: Kevin Abt/Chief Engineer

Telephone: 757-683-2139    Fax: 757-683-2151    Email: kabt@portofvirginia.com

**C. Project Title:** Craney Island Rail Connector

**D. Project Location:** (City/County, Rail line, Railroad Mile Post, attach map)

Runs southwest from proposed Craney Island Marine Terminal (CIMT) to APM Terminal, and then runs west parallel to Commonwealth Railway along median of Route 164 Western Freeway to Route 17.

**E. Owner of Property/Right-of-Way/Facility/Personal Property:**

Virginia Port Authority

**F. Responsible Party for Continuous Maintenance of Project:**

Virginia Port Authority



## G. Project Information:

### 1) Description of Project:

The Craney Island Rail Connector (CIRC) will be a multimodal rail corridor connecting the future Craney Island Marine Terminal (CIMT) on the Craney Island Dredged Material Management Area (CIDMMA) Eastward Expansion to the Commonwealth Railway mainline track. The CIRC will run southwest from the CIMT, through the APM Terminal interface, and then west along the median of the Route 164 Western Freeway, parallel to the Commonwealth Railway mainline track where it will intersect with the mainline track at the bridged overpass at Route 164 and Route 17. Figure 1 shows the alignment of the proposed CIRC corridor and affected properties.

The CIRC is divided into two phases. Phase I of the project is the construction of a siding track in the median of Route 164 from the Highway 17 Bridge to the APM Terminal track interface. Phase II includes the planning and design of a section of track from the APM Terminal to CIMT. Phase I is currently ready to go to construction. The grading in the median of Route 164 is already complete and the Phase I section can receive track with minimal design effort. The Phase II section, from CIMT to APM, is still in the planning stage, and will require the development of a design-build request for proposal, along with preliminary engineering and detailed design work, to include environmental assessment/permitting, route/site surveying, geotechnical analysis, and utility mapping.

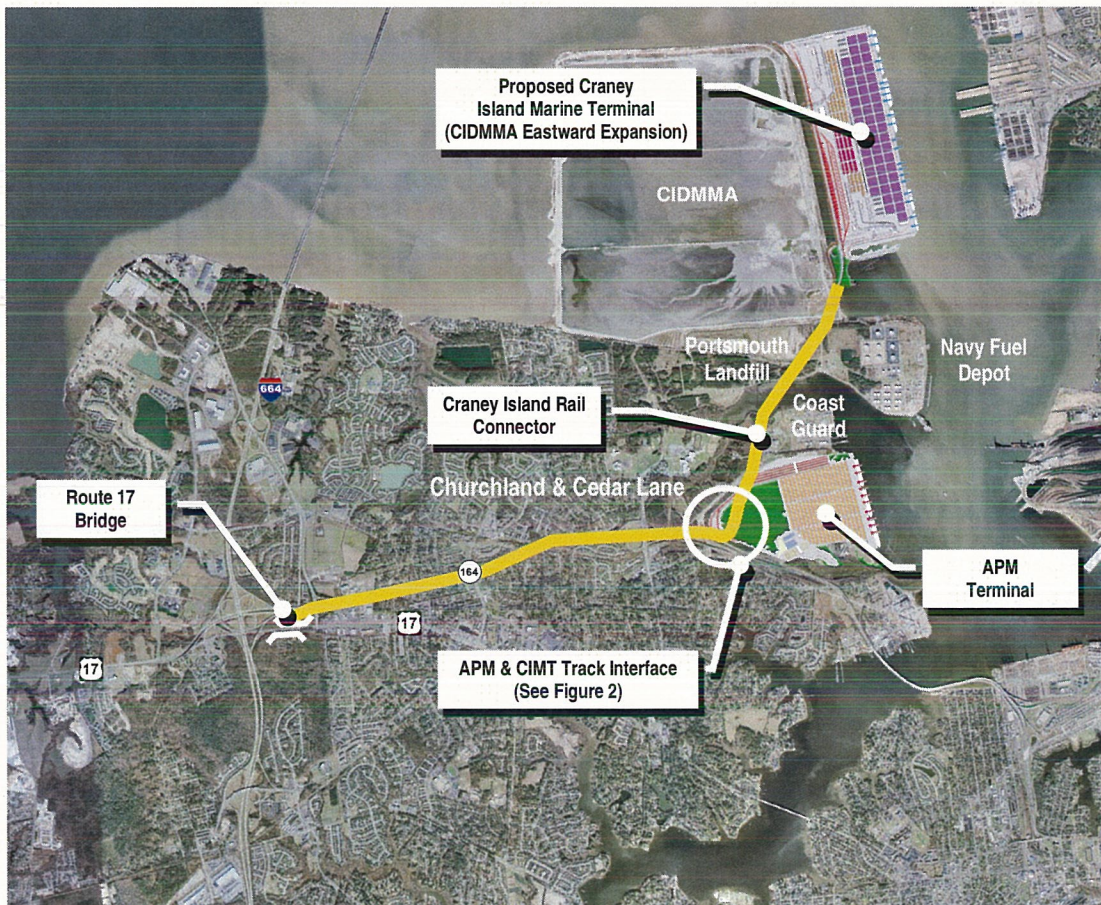


Figure 1: Craney Island Rail Connector and Surrounding Area



## 2) Project Objective:

The objective of the CIRC is to support the construction of, and then operation of, the Craney Island Marine Terminal. Construction of the CIMT will begin in 2017 to support the CIMT Phase I operation date of 2020. At a cost of over \$400 Million, Phase I construction of the terminal will require massive amounts of construction materials to be transported to the site that currently lacks adequate land access. Construction of the CIRC must begin by 2014 to support construction of the CIMT beginning in 2017.

Once Phase I CIMT construction is complete, the CIRC will then be used as the intermodal connection to the new terminal and will be able to transport up to 50% of the terminal's inbound and outbound containerized cargo by rail.

The CIRC will provide direct rail access to CIMT, and serve as a siding track parallel to the mainline, providing flexibility of access to multiple rail operators simultaneously. This will increase the operational capacity of the Commonwealth Railway to allow the APM Terminal to stage and sequence long trains without obstructing CIMT inbound or outbound rail flow on the mainline track. The project will reduce congestion and movement delays at the APM rail interface, thus contributing to the reduction of future rail network congestion problems elsewhere in the region.

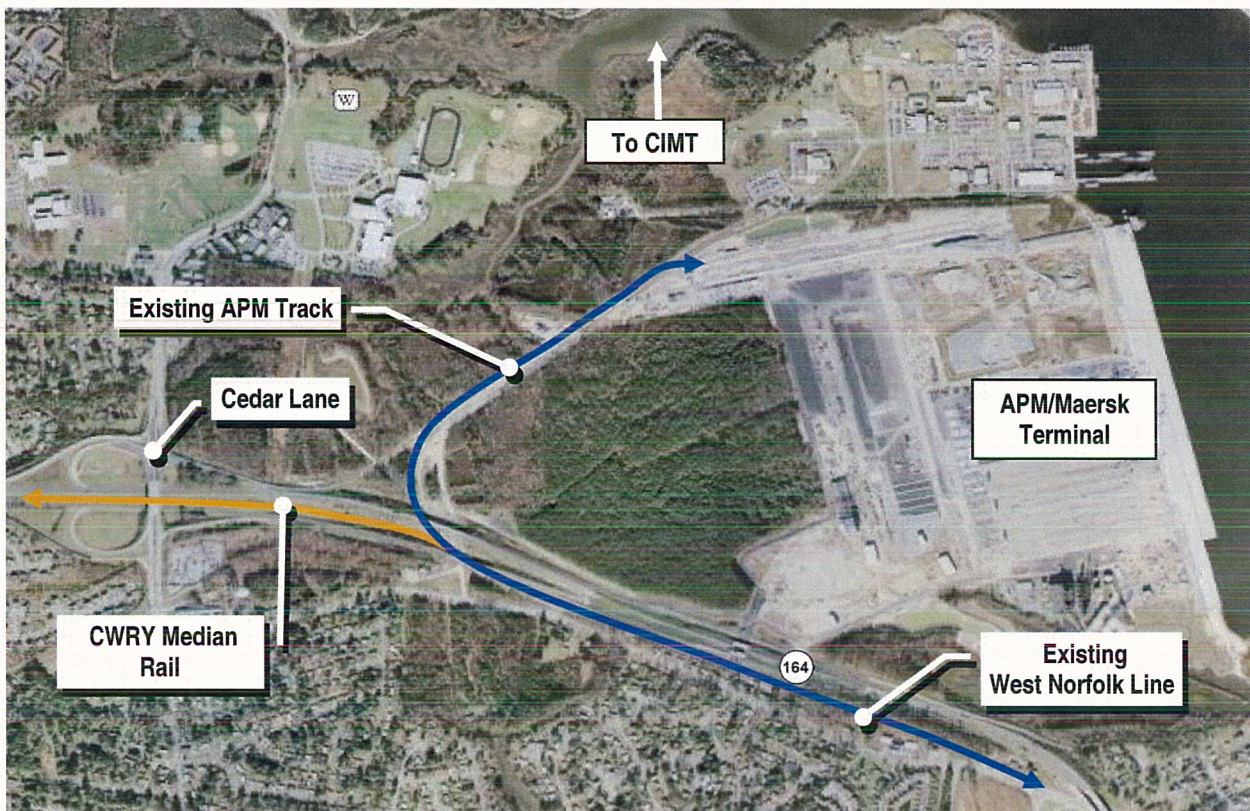


Figure 2: APM and CIMT Track Interface



Figure 2 shows a close up of the current and proposed APM and CIMT track interfaces. Current train staging and sequencing operations at the APM Terminal are conducted using the existing APM Lead to the West Norfolk Line of the Commonwealth Railway. This operation involves the assembly, staging, and sequencing of very long trains (6,000 to 8,000 feet). Due to the shortage of track length at the APM terminal, this operation results in the obstruction of rail traffic movement along the Commonwealth Railway mainline track. Once the CIMT begins transporting containerized cargo by rail, this operation, as it is currently conducted, will result in significant obstructions and delays to CIMT rail movement. The proposed CIRC would provide over 19,000 feet of siding track parallel to the mainline track, which would facilitate free-flowing access to both terminals, and allow train assembly, staging, and sequencing operations to be conducted without obstructing mainline rail traffic movement.

### **3) Relationship to Other Projects under Development by Applicant or Previously Funded by this Program:**

There are three projects relevant to the CIRC: Craney Island Dredged Material Management Area (CIDMMA) Eastward Expansion; construction of the Craney Island Marine Terminal (CIMT); and the Commonwealth Railway Mainline Safety Relocation Project (CRMSRP).

#### CIDMMA Eastward Expansion

The CIDMMA is a Federally-owned and U. S. Army Corps of Engineers (USACE) -operated dredged material placement area that is open for public and private dredged material from the Norfolk Harbor and adjacent waters. The CIDMMA has been in continuous use since 1957, serving the dredging needs of the Norfolk Harbor. Originally designed for a life span of 20 years, with a capacity of 96 million cubic yards, the CIDMMA has over 225 million cubic yards of dredged material deposits as of the end of 2004. Without adding additional dredged material placement capacity, the CIDMMA is projected to reach its useful life in 2025.

To extend the useful life of the CIDMMA, the USACE completed an Environmental Impact Statement in 2006 which recommended an eastward expansion. Encompassing 580 acres, the expansion would not only extend the useful life of the CIDMMA, it would provide additional acreage for long-term berthing and landside port facilities, and possibly serve as a logistical and tactical area supporting deployment of national defense forces. At an estimated project cost of \$712 million, construction of the supporting dikes is scheduled to begin in 2010 followed by filling with dredge material beginning in 2012.

#### Craney Island Marine Terminal

Shipment of marine containers through the ports of Hampton Roads has been growing rapidly and is projected to triple in volume by 2030. To support this demand, the VPA developed a plan for its fourth marine terminal in the Hampton Roads area which would be located on the 580 acre eastward expansion of the CIDMMA. CIMT will provide 8400 linear feet of wharf, 20 Suez-class cranes, and an on-terminal Intermodal Container Transfer Facility. Terminal construction will be in four phases, with the first phase scheduled to begin in 2017, with completion by 2020. Initial Phase I terminal operations will begin in 2020, with a capacity of handling 1.0 million twenty-foot equivalent-length units (TEUs) of containerized cargo. Final Phase IV terminal



build-out will be completed by 2032, and provide a 2.5 million TEU capacity. Total project cost is estimated at \$1.7 billion.

At peak capacity, 50% of the containerized cargo will move by rail: 714,286 containers/year, which equates to 2800 containers/day or 7 to 8 trains/day traveling to and from the CIMT. Movement of this cargo will require a well-designed multi-modal link between the CIMT and the existing road and rail transportation network located about 2 miles south of the CIDMMA. By increasing rail cargo movement up to 50 percent, CIMT truck traffic and congestion on Commonwealth highways will be significantly reduced.

#### Commonwealth Railway Mainline Safety Relocation Project (CRMSRP)

VPA is the lead state agency for this project, costing approximately \$60 million. The first phase of the project, partially funded with \$4.8 million in FY 07 Rail Enhancement Funds, is complete and involved the environmental review and preliminary engineering for the relocation of the existing Commonwealth Railway (CWRY) mainline track to the medians of I-664 & Route 164 from APM to Bowers Hill. The second phase of the project includes final design and construction of a single track for the entire project length. Final design is complete; construction is 60% complete and scheduled to be complete by December 2009.

#### **4) Describe the Public Benefit of Project. Identify significant types of benefits and beneficiaries from this project. (See Attachment A)**

Together with the eastward expansion of the CIDMMA, the CIMT will provide over \$5 billion in total state and regional economic activity, create more than 54,000 new port-related jobs paying over \$1.7 billion in annual wages, and generate state and local tax revenues of \$155 million. This significant economic impact will come from marine terminal design and construction, terminal and port related containerized cargo transportation operations, and import-export supply chain distribution center operations.

The economic impacts of the CIMT will go far beyond terminal construction and port operations, to impact various interdependent economic sectors within the entire Hampton Roads community. The CIRC will be critical to efficient and effective CIMT transportation operations, and through its direct road and rail corridor, provide vital access to the region's and nation's multimodal transportation network.

Placement of the siding track parallel to the mainline Commonwealth Railway within the median of the Route 164 Western Freeway will significantly improve rail capacity and allow simultaneous assembly, staging, and routing of trains transporting high volumes of containerized cargo both inbound to and outbound from both the APM and CIMT terminals.

This project supports the following VTrans2025 goals:

- a. Provide a safe, secure and integrated transportation system that reflects different needs of the Commonwealth *by providing an alternate means through which containerized cargo can be transported by rail vice truck, thus helping to decrease traffic volume on Commonwealth highways.*



- b. Facilitate the efficient movement of people and goods and expand choices and improve interconnectivity of all transportation modes *by increasing the efficiency and effectiveness of rail transport and decreasing the number of truck movements along Commonwealth highways.*
- c. Improve Virginia's economic vitality and provide access to economic opportunities for all Virginians *by increasing Port competitiveness and providing vital access to regional and national markets and multimodal transportation networks.*
- d. Improve the quality of life for Virginians and the coordination of transportation, land use and economic development planning activities *by shifting some of the marine terminal transportation load from road to rail, thus reducing congestion on Commonwealth highways.*

The project also supports the following Virginia State Rail Plan goals:

- a. Promote safety and security *by reducing the number of trucks on Commonwealth highways by providing the means to shift up to 50% of marine terminal containerized cargo transport to rail.*
- b. Improve system capacity, reliability and speed *by facilitating increased container throughput at CIMT and mitigating highway traffic congestion.*
- c. Improve intermodalism, connectivity and mobility *by increasing the rail share of intermodal traffic at CIMT, and enabling an additional main line rail carrier, CSX, to have access to CIMT.*
- d. Improve Virginia's economic competitiveness and quality of life *by reducing the cost of handling containers at CIMT, reducing congestion on roads, and reducing air pollution by reducing truck traffic from terminal operations.*
- e. Support Virginia DRPT Public-Private partnership efforts and program delivery *by ensuring the project provides an excellent return on investment in terms of enhanced productivity, air quality improvement, and reduced congestion.*

**5) Attachment A – Project Data Information Form – Must be completed by Applicant and submitted with this application.**

**H. Type of Project:**

- 1) ☒ New Construction      ☐ Rehabilitation    ☐ Study
- 2) ☒ Rail Infrastructure      ☒ Rail Facility/Station  
☐ Equipment/Rolling Stock    ☐ Signals/Communication Equipment
- 3) Other \_\_\_\_\_

**I. Application Scope of Work Covers:**

☐ Entire Project    ☒ A Phase of a Multi-Phase Project    ☐ Completion Phase

**J. Project Budget Summary:**



Preliminary Service, Engineering, or Feasibility Study	\$4,500,000
Environmental Evaluation	500,000
Design Engineering	8,000,000
Right of Way Acquisition	4,000,000
Construction	159,200,000
Construction Management	5,000,000
Lease/Acquisition of Equipment	N/A
Public Involvement (if applicable)	N/A
Other _____	N/A
Subtotal Project Budget	\$181,400,000
Total Project Budget	\$181,400,000

DRPT  
Correction

**K.** See attached.

**L. Rail Enhancement Funds Requested in this Application:** \$18,340,000

**M. Local Match Required by Applicant:** \$7,860,000

**If Overmatch, Provide Percentage** \_\_\_\_\_

**1) Match Breakdown by Source (Including any in-kind match)**

- a. Provider of Local Match: Virginia International Terminals
- b. Status (confirmed/anticipated): Confirmed
- c. Attach justification for value of in-kind match.

**2) Other Funding Sources Beyond Match Requirement**

- a. Provider of Overmatch \_\_\_\_\_
- b. Status (confirmed/anticipated) \_\_\_\_\_

**N. Project implementation schedule (based in months). List major milestones of the project,** including environmental review and public involvement points if applicable.

Phase I construction is planned to begin in January 2010 concurrent with Phase II PED. Phase I construction should be complete by December 2010. Phase III design will begin in 2012 with construction beginning in 2014.

**O. Statement of how this project promotes or does not preclude dual/multi-access use.**

Both Class I Rail Roads (Norfolk Southern and CSX) will have access to the CIMT and APM via the Commonwealth Railway short-line.



**P. List additional users of rail line, facility, and/or equipment.**

Commonwealth Railway will provide access to both Class I Railroads. The CIMT will be a public use facility, expected to serve all of the 40+ shippers that move goods through the port.

**Q. Identify any possible environmental or other issues/concerns within the scope of this project.**

Anticipated environmental challenges that may be associated with project include: APM Restrictive Covenant Modification; Wetlands Mitigation.

**Required Attachments:**

*Application is not complete without items 1-5 completed by the Applicant and submitted with the Application.*

- 1. Attachment A - Project Data Information Form (Provided)**
- 2. Attachment B - Application Checklist (Provided)**
- 3. Detailed cost, budget and schedule. Include preliminary engineering to 30% report, if applicable (Sample in Appendix D)**
- 4. Certification of Match/% of Match/Documentation of Source of Match Including Defined Match Source (To be provided by Applicant)**
- 5. Certification of Additive Investment (To be provided by Applicant)**
- 6. Statement from the Applicant/Owner of the facility that the SWAM participation goals will be achieved by the project.**
- 7. Statement from the owner of the facility that acknowledges the Commonwealth will have a public interest in the facilities, materials, equipment and improvements funded or impacted by this project (To be provided by Applicant/Owner)**

**Application and Attachment Certification**

To the best of my knowledge all information contained in this application and its attachments is true. The information provided to the Virginia Department of Rail and Public Transportation (DRPT) is subject to full disclosure except where protected by Virginia Code. Any additional documentation related to this application will be provided to DRPT upon request.

**Authorized Signature and Title:**

Kevin P. [Signature] CHIEF ENGINEER

Date: 1-30-09





**Rail Enhancement Fund  
Project Application  
Completed Application Submission Information**

One signed original, twelve copies, and an electronic copy in pdf format of the completed application and required documentation must be mailed under applicant cover to:

Director  
Virginia Department of Rail and Public Transportation  
1313 East Main Street, Suite 300  
Richmond, VA 23219



### Certification of Match

The Virginia Port Authority (VPA) has applied to the Commonwealth of Virginia for Department of Rail and Public Transportation Rail Enhancement Funds in the amount of \$18,340,000 to assist in funding the preliminary engineering, environmental assessment, design, and construction of the Craney Island Rail Connector. The percentage of Rail Enhancement Funding requested is 70.0% of the estimated cost.

As an attachment to the funding application, this document certifies that VPA will provide a 30.0% funding match in the amount of \$7,860,000 from revenue generated from Virginia International Terminals (VIT) terminal operations (as opposed to Commonwealth Port Funds provided by the Commonwealth of Virginia), which constitutes the remaining balance of the estimated cost.



Kevin Abt  
Chief Engineer  
Virginia Port Authority



### Certification of Additive Investment

This certifies that the Commonwealth of Virginia Rail Enhancement Funds requested in this application will add significant capital improvements to the state's rail infrastructure, and result in public benefits to the Commonwealth that are greater than the actual amount of public funds invested.



Kevin Abt  
Chief Engineer  
Virginia Port Authority



Statement from the Applicant  
SWAM Participation Goals to be Achieved by the Project

This is to certify that the Virginia Port Authority will work to achieve the Small, Women-owned, and Minority-owned (SWAM) participation goals in the project for which these Rail Enhancement Funds are requested, as directed by Executive Order 33 (2006) from the Governor of the Commonwealth of Virginia.



Kevin Abt  
Chief Engineer  
Virginia Port Authority



Statement from the Applicant  
Acknowledgement of Commonwealth Public Interest

This statement from the Virginia Port Authority acknowledges that the Commonwealth of Virginia will have a public interest in the facilities, materials, equipment, and improvements funded or impacted by this project.



Kevin Abt  
Chief Engineer  
Virginia Port Authority





**Rail Enhancement Fund  
Project Application**

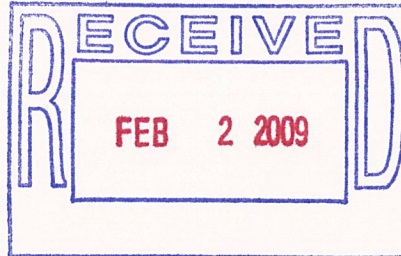
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**Attachment A  
Project Data Information Form**

Date: **01/30/2009**

**Name of Applicant and Project**

Virginia Port Authority  
Craney Island Rail Connector



**General Instructions:** Please complete the following forms that apply to the project application.

- For Freight Service projects, complete forms A1, A2 and A5
- For Intercity/Amtrak passenger projects, complete forms A1, A3 and A5
- For Commuter/VRE passenger projects, complete forms A1, A4 and A5
- For projects that involve benefits to both freight and passenger projects, form A1 and forms A2-A4 that apply must be completed. For each completed form A2-A4, a form A5 must be completed for each category for projects resulting in multiple project benefits.

**Terms:**

**Project Cost and Construction Period:** Form A1 shall be completed with total project cost by year of expenditure with total DRPT cost identified by year of expenditure. This section must be completed for all project applications.

**Demand Characteristics:** This category of information relates to the additional demand for rail service (including freight and passenger) due to the project. This additional demand must be over and above baseline conditions that currently exist. The specific data to enter here defines initial demand, steady state demand, and the years until steady state demand is achieved.

**Steady State Demand:** This term refers to the point at which the project benefits/demand have reached a long-term, sustainable level.

**Project Impact on Travel Distance:** This category of information includes the distance that would be traveled by vehicle or train. All distances should be limited to miles within Virginia. The distance should relate directly to the project-impacted area.

**Demand Characteristics for a 15-year Performance Period:** This term refers to the project output by performance year, which will be utilized to determine the public benefits and to determine the performance requirements over the 15-year Performance Period of the Grant Agreement.



**Attachment A**  
**Form A1 – Project Cost and Construction Period**

<b>Year</b>	<b>Total Project COST</b>	<b>Total DRPT COST</b>
2010	\$12,200,000 (1)	\$8,540,000
2011	\$2,000,000 (2)	\$1,400,000
2012	\$6,000,000 (3)	\$4,200,000
2013	\$6,000,000 (3)	\$4,200,000
2014	\$55,000,000 (4)	_____
2015	\$50,000,000 (4)	_____
2016	\$50,000,000 (4)	_____
<b>Total</b>	<b>\$ 181,400,000</b>	<b>\$18,340,000</b>

*DRPT Correction*

Notes:

- 1) 9.2 M for Phase I Construction + 3.0 M for Phase II PED/ENV
- 2) Phase II PED
- 3) Phase II design, acquisition, and utility relocations
- 4) Phase II Construction

Use Form A-5 to provide demand characteristics for the 15-Year Performance Period.



**Attachment A**  
**Form A2 – Freight Service**

Demand Characteristics	CATEGORY	UNITS	VALUE
	Steady state demand – diversion of freight to rail (from trucks)	Carloads/Year	625,000
	First year of diversion	Carloads/Year	41,667
	Number of years until steady state	Number of Years	15

Project Impact on Travel Distance	CATEGORY	UNITS	VALUE
	Rail miles in Virginia (Existing routing before project)	Miles	2.46
	Rail miles in Virginia (routing after project completion)	Miles	7.01
	Number of years until steady state	Miles	15

Conversions	CATEGORY	UNITS	VALUE
	Railcars per Train	Railcars/Trains	100
	Rail tons per Railcar	Tons/Railcar	23.76
	Trucks per Railcar	Trucks/Railcar	4

Other	CATEGORY	UNITS	VALUE
	Change in Daily Delay for Freight Trains	Railcars/Trains	Not Applicable
	Reduction in Number of Rail At-Grade Crossings	Tons/Railcar	Not Applicable

Use Form A-5 to provide demand characteristics for the 15-Year Performance Period.



**Attachment A**  
**Form A5 – Demand Characteristics for 15-Year Performance Period**

Performance Year	Performance Value*
1	600,000
2	600,000
3	600,000
4	600,000
5	600,000
6	782,500
7	975,000
8	1,350,000
9	1,350,000
10	1,725,000
14	1,725,000
12	1,900,000
13	2,100,000
14	2,300,000
15	2,500,000
Total	19,707,500

50% of total  
 moved by rail.  
 TEU divided by  
 1.75 to get container/  
 railcar/trucks

steady state  
 = 714,286 container/  
 Trucks

\* For Freight Service Projects – car loads or containers per year  
 For Inter-City / Amtrak Passenger Projects – passengers per year  
 For Commuter / VRE Passenger Projects – passengers per year





**Rail Enhancement Fund  
Project Application Checklist  
Attachment B**

Internal Use

DRPT Tracking #

Date: 01/30/2009

**Name of Applicant and Project:**

Virginia Port Authority  
Craney Island Rail Connector

**Checklist for Application**

1. Project is consistent with goals of applicable adopted state, regional and/or local plans.

☒ Yes ☐ No

2. Project is an Additive Investment to Virginia.

☒ Yes ☐ No

3. Project provides for, or does not preclude, shared or dual access opportunity.

☒ Yes ☐ No

4. Applicant has provided documentation and certification of at least a minimum 30% match.

☒ Yes ☐ No

5. Applicant has provided an environmental review plan and/or public involvement plan, if applicable, and required budget for this activity as outlined in Appendix D.

☒ Yes ☐ No

6. Application is complete, including signature and specified number of hard copies and an electronic (pdf file) copy; and Applicant has reviewed the Standard Agreement as provided in Appendix C.

☒ Yes ☐ No



## **Craney Island Rail Connector**

### **Detailed Project Schedule**

<u>Scope of Work</u>	<u>Milestone Dates</u>
Begin Phase I Construction	January 2010
Complete Phase I Construction	December 2010
Complete Phase II Preliminary Engineering	December 2010
Begin Phase II Design	January 2012
Complete Phase II Design	December 2013
Begin Phase II Construction *	January 2014
Complete Phase II Construction *	December 2016

\* Note: Funding for Phase II construction not part of this REF application



### Phase 1 Construction Cost Estimate

Item Description	Qty	Units	Unit Bid Price	Total Bid Price
<b>Station 105+00 - 272+00</b>				
Geotextile Fabric for Railway Bed	27833	SY	\$ 1.84	\$ 51,213.33
Single Rail (Inc. Sub-ballast, Ballast, Ties, etc)	16700	LF	\$ 250.00	\$ 4,175,000.00
#10 Turnouts	4	EA	\$ 20,000.00	\$ 80,000.00
Railway Maintenance Road	10800	SY	\$ 11.09	\$ 119,772.00
Subtotal				\$ 4,425,985.33
<b>Station 272+00 - 302+00</b>				
Additional Clearing	1	ACRE	\$ 10,000.00	\$ 10,000.00
Earthwork	15000	CY	\$ 25.00	\$ 375,000.00
Erosion Control	1	LS	\$ 25,000.00	\$ 25,000.00
Stormdrain Modifications	1	LS	\$ 50,000.00	\$ 50,000.00
Geotextile Fabric for Railway Bed	5000	SY	\$ 1.84	\$ 9,200.00
Single Rail (Inc. Sub-ballast, Ballast, Ties, etc)	3000	LF	\$ 250.00	\$ 750,000.00
#10 Turnouts	5	EA	\$ 20,000.00	\$ 100,000.00
Diamond Crossing	1	EA	\$ 350,000.00	\$ 350,000.00
Subtotal				\$ 1,669,200.00
SUBTOTAL (Sections)				\$ 6,095,185.33
Contingency (30%)				\$ 1,828,555.60
SUBTOTAL (w/ Contingency)				\$ 7,923,740.93
Bid and Contract Management (16%)				\$ 1,267,798.55
<b>TOTAL PHASE I CONSTRUCTION COST</b>				<b>\$ 9,191,539.48</b>

### Phase 2 Cost Estimate:

1. PED = \$5 million
2. Design, land acquisition & utility relocation = \$6 million
3. Construction = \$155 million